

## **Project Management Competency 4.2**

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**Competency 4.2** Project management personnel shall demonstrate a familiarity level knowledge of the Department's project management system management roles, responsibilities, authorities, and organizational options.

### **1. Supporting Knowledge and/or Skills**

- a. Describe the line organization chain from the Secretary of Energy to the Project Manager.
- b. Discuss the purpose and responsibilities of the Energy System Acquisition Advisory Board (ESAAB).
- c. Discuss events that will "trigger" an independent review of a project.
- d. Discuss the role and responsibilities of each of the following positions/organizations in the project management system line organization:
  - Program Secretarial Officer
  - Heads of Field Organizations
  - Project Manager
  - Departmental Support Organizations
  - Acquisition Executive
  - Management and Operating (M&O) Contractor
- e. Describe the following project organization options and the circumstances under which each may be used:
  - Matrix support
  - Dedicated
- f. Describe the relationship between the project life cycle and critical decision points.

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### 2. Self-Study Activities (Corresponding to the Intent of the Above Competency)

Below are two web sites containing many of the references you may need.

Web Sites		
Organization	Site Location	Notes
Department of Energy	<a href="http://wastenot.inel.gov/cted/stdguido.html">http://wastenot.inel.gov/cted/stdguido.html</a>	DOE Standards, Guides, and Orders
U.S. House of Representatives	<a href="http://law.house.gov/cfr.htm">http://law.house.gov/cfr.htm</a>	Searchable Code of Federal Regulations

**Scan** Department of Energy (DOE) Order 4700.1, *Project Management System*, Parts A through C, Chapter I. This Order will be phased out upon the incorporation of its contents into contracts or other agreements. It is presented here because its general content remains applicable.

**Scan** DOE O 430.1, *Life-Cycle Asset Management*, Section 6, Requirements, and Section 7, Responsibilities.

EXERCISE 4.2-A Referring to DOE Order 4700.1, *Project Management System*, Chapter I, Part C, Management Roles, Responsibilities, and Authority, what is the line of management from the Secretary to the project manager for major system acquisitions, major projects, and other projects?

EXERCISE 4.2-B Referring to DOE O 430.1, *Life-Cycle Asset Management*, Section 7, Responsibilities, what role does the Program Office (when designated as Landlord) have with strategic system acquisitions?

EXERCISE 4.2-C Referring to Chapter I, Part C, Management Roles, Responsibilities, and Authority, of DOE Order 4700.1, *Project Management System*, what are the specific responsibilities of the Project Manager?

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**Scan** DOE Order 4700.1, *Project Management System*, Chapter I, Parts A through D. This Order will be phased out upon the incorporation of its contents into contracts or other agreements. It is presented here because its general content remains in effect for Strategic Systems at the Secretariat level and for Major Systems at the Program Secretarial Officer level until revised and streamlined ESAAB and equivalent procedures are in place.

**Scan** DOE Memorandum “Strategic and Major Systems Energy Systems Acquisition Advisory Board Procedures” from Antonio F. Tavares, dated July 15, 1996. This memorandum provides the most up-to-date information on the ESAAB process, Strategic Systems and Major Systems.

**Scan** DOE O 430.1, *Life-Cycle Asset Management*, Section 6, Requirements.

EXERCISE 4.2-D Referring to DOE Order 4700.1, *Project Management System*, Chapter I, Part C, Management Roles, Responsibilities, and Authority, what are the purpose and responsibilities of the ESAAB?

EXERCISE 4.2-E Referring to DOE Order 4700.1, *Project Management System*, Chapter I, Part D, Major System Acquisitions (currently called Strategic Systems) and Major Projects (correctly called Major Systems), what particular function does the ESAAB provide in the “key decision” (currently called Critical Decision) process?

**Read** DOE N 4700.5, *Project Control System Guidelines*, Attachment 2, Project Control System Guidelines.

**Read** DOE Order 4700.1, *Project Management System*, Attachment 3, Definitions (for “Independent Assessment”), and pages III-1 through III-38, Project Control. This Order will be phased out upon the incorporation of its contents into contracts or other agreements. It is presented here because its general content remains applicable.

**Scan** DOE O 430.1, *Life-Cycle Asset Management*, Section 6, Requirements.

**Scan** Department of Energy Regulations (DEAR), Part 970, *DOE Management and Operating Contracts*.

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**Read** DEAR, Subpart 970.5204-9, *Accounts, Records, and Inspection*.

**EXERCISE 4.2-F** Referring to DOE N 4700.5, *Project Control System Guidelines*, Attachment 2, Project Control System Guidelines, and to DEAR, Subpart 970.5204-9, *Accounts, Records, and Inspection*, what are the general events or concerns that would precipitate an independent review of a project?

**Read** DOE Order 4700.1, *Project Management System*, Part C, Management Roles, Responsibilities, and Authority.

**Scan** any comprehensive text on project management systems and techniques, such as *A Guide to the Project Management Body of Knowledge*, Project Management Institute Standards Committee, 1996. This document can be downloaded (in .pdf format) from the web site, <http://www.pmi.org/>

**EXERCISE 4.2-G** Discuss the role and responsibilities of each of the following positions/organizations in the project management system line organization:

- Program Secretarial Officer
- Heads of Field Organizations
- Project Manager
- Departmental Support Organizations
- Acquisition Executive
- M&O Contractor

**EXERCISE 4.2-H** Describe the following project organization options and the circumstances under which each may be used:

- Matrix support
- Dedicated

**EXERCISE 4.2-I** Describe the relationship between the project life cycle and critical decision points.

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### **3. Summary**

DOE places authority and responsibility at the appropriate management level according to the scope and budget of the project. This approach allows decisions to be made and actions to be taken at the appropriate levels within DOE management. Headquarters program elements are responsible for overall program policy, planning, program development, budget preparation, and broad program direction. The field elements are responsible for implementing these program activities and for providing major support to the Headquarters programming and budgeting processes. Implementation of the project management system involves both these staff (or program) elements and the line chain of authority. The project management chain for major projects and system acquisitions is the Office of the Secretary, (Acquisition Executive, Program Secretarial Officer according to DOE Order 4700.1, and Associate Deputy Secretary of Field Management according to DOE O 430.1), the Program Office, the Head of the Field Element, and the Project Manager.

The purpose of the ESAAB is to assist the Acquisition Executive in the decision-making process for Strategic System Acquisitions and selected Major System Acquisitions. DOE project managers are required to address the following aspects in their presentations to the ESAAB:

- Introduction and purpose
- Description of project
- Background
- Objectives and baseline
- Organization
- Readiness to proceed
- Problems, issues, and items of concern
- Summary of key points and next steps

The ESAAB, after hearing the presentations, issues a memorandum outlining the following:

- Decision reached
- Actions assigned
- Results of special studies and assessments
- Limitations associated with approvals
- Resource levels that may be used for budgetary and organizational planning
- Constraints on systems development and definition
- Schedule for accomplishing action items
- The time frame for the next meeting
- Summary of the approved cost, schedule, and technical baselines

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The general areas of project performance monitored by the contractor and DOE are:

- Funds management
- Accounting
- Work authorization
- Performance analysis
- Reporting

The types of reporting mechanisms to be used by the contractor in reporting project performance to its own management and to DOE include the following:

- Narrative status reports
- Schedule status reports
- Cost status reports
- Labor status reports
- Problem reports
- Baseline change status reports
- Development of predetermined thresholds that will trigger problem reports
- Identification and reporting of “at risk” areas
- Trend charts

The major responsibilities of the project manager are to:

- Identify the applicability of the specific control guidelines for the compliance reviews and participate in the review process.
- Prepare a project management plan.
- Specify the frequency of reporting and establish variance analysis thresholds.
- Develop project-specific procedures for use of contingency.
- Provide written comments or findings to the contractor for clearly established management action and resolution.

DOE Order 4700.1, *Project Management System*, states, “It is Departmental policy to manage all projects in accordance with this Order. The chapters of this Order provide instructions, formats, and procedures to implement the project management system.” DOE places authority and responsibility at the appropriate management level according to the scope and budget of the project. This approach allows decisions to be made and actions to be taken at the appropriate levels within DOE management. Headquarters program elements are responsible for overall program policy, planning, program development, budget preparation, and broad program direction. The field elements are responsible for implementing these program activities and for providing major support to the Headquarters programming and budgeting processes. Implementation of the project management system involves both these staff (or program) elements and the line chain of authority. The project management chain for major projects and system acquisitions is the Office of the Secretary, (Acquisition Executive, Program Secretarial Officer according to DOE Order 4700.1, and Associate Deputy Secretary of Field Management according to DOE O 430.1), the Program Office, the Head of the Field Element, and the Project Manager.

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### 4. Exercise Solutions

(Any reasonable paraphrase is acceptable.)

EXERCISE 4.2-A Referring to Chapter I, Part C, Management Roles, Responsibilities, and Authority, of DOE Order 4700.1, *Project Management System*, what is the line of management from the Secretary to the project manager for major system acquisitions, major projects, and other projects?

ANSWER 4.2-A Office of the Secretary → Acquisition Executive → Program Secretarial Office → Program Office → Head of the Field Element → Project Manager

EXERCISE 4.2-B Referring to DOE O 430.1, *Life-Cycle Asset Management*, Section 7, Responsibilities, what role does the Program Office (when designated as Landlord) have with strategic system acquisitions?

ANSWER 4.2-B Supports the Office of Field Management in verifying that field elements have asset management performance criteria and measures in place to effectively oversee nonprogrammatic facilities. Supports, or if delegated, leads the critical decision process for strategic systems funded by the landlord (from ¶7.d.[4] and [8]).

EXERCISE 4.2-C Referring to Chapter I, Part C, Management Roles, Responsibilities, and Authority, of DOE Order 4700.1, *Project Management System*, what are the specific responsibilities of the Project Manager?

ANSWER 4.2-C Any five of the following:

- Secure technical support.
- Assure that all project activities comply with Federal, State, and local regulations for the protection of the environment and safety and health of employees and the public.
- Report project activities.
- Establish and implement quality assurance actions.
- Secure administrative support from the Head of the Field Element
- Initiate procurement actions.

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- Oversee all construction activities.
- Manage all project finances.
- Prepare and conduct test plans.
- Establish configuration control.

EXERCISE 4.2-D Referring to DOE Order 4700.1, *Project Management System*, Chapter I, Part C, Management Roles, Responsibilities, and Authority, what are the purpose and responsibilities of the ESAAB?

ANSWER 4.2-D Purpose: To support the Acquisition Executive by providing advice, assistance, and recommendations at key decision points for each Strategic System Acquisition and designated Major System Acquisitions.

Responsibilities: Provides a single forum for the discussion of issues and alternatives and is designed to assure coordinated, objective senior-level management advice to the Acquisition Executive.

EXERCISE 4.2-E Referring to DOE Order 4700.1, *Project Management System*, Chapter I, Part D, Major System Acquisitions (currently called Strategic Systems) and Major Projects (currently called Major Systems), what particular function does the ESAAB provide in the “key decision” (currently called Critical Decision) process?

ANSWER 4.2-E Each key decision point requires ESAAB approval prior to the release of appropriated funds.



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EXERCISE 4.2-F Referring to DOE N 4700.5, *Project Control System Guidelines*, Attachment 2, Project Control System Guidelines, and to *Federal Acquisition Regulation, Amendment 21*, Subpart 970.5204-9, Accounts, Records, and Inspection, what are the general events or concerns that would precipitate an independent review of a project?

ANSWER 4.2-F Generally DOE, in accordance with contract provisions, has the “right to inspect the work and activities of the contractor . . . at such time in such manner as it shall deem appropriate.” With regard to project management and performance analysis, DOE or the contractor management may commission an independent review “to determine project status by analyzing technical, schedule, and cost performance considering potential problems, their impact, and alternative courses of action.” The conduct of a performance analysis can entail:

- Identifying significant differences between planned and actual cost, schedule, and technical activities.
- Implementing a performance measurement system to identify and analyze problematic areas.
- Validating the estimates-at-completion (EAC).

EXERCISE 4.2-G Discuss the role and responsibilities of each of the following positions/organizations in the project management system line organization:

- Program Secretarial Officer
- Heads of Field Organizations
- Project Manager
- Departmental Support Organizations
- Acquisition Executive
- M&O Contractor

ANSWER 4.2-G The chart, taken from the DOE Order 4700.1, *Project Management System*, Part C, Management Roles, Responsibilities, and Authority, will explain the roles and responsibilities of each of the participants. Any paraphrase or similar explanation will be acceptable.

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PROJECT MANAGEMENT SYSTEM	
Participant	Roles & Responsibilities
Program Secretarial Officer	Each Program Secretarial Officer has full responsibility for the management planning and execution of his/her program activities including projects, subject to the national energy plan; approved Departmental policies and program strategies; mission area assignments; enacted budget legislation; approved resource allocations; and the Departmental PMS. For MPs, the Program Secretarial Officer is responsible for each approval or key decision not specifically reserved for the Acquisition Executive.
Heads of Field Organizations	The field element shall be involved in the planning of all assigned projects and shall develop much of the project documentation, which includes the "Justification of Mission Need" and the Project Plan, including the project charter. The Head of the Field Element shall establish an appropriate project management organization and will delegate appropriate authority to the project manager for management and direction of the project(s).
Project Manager	The Project Manager will be the point of contact for the information flow to Headquarters. Day-to-day activities within the scope and charter thresholds and milestones will normally flow between the Project Manager and the Program Manager. The Project Manager shall be dedicated full-time to the MSAs; however, on other projects the same Project Manager may have authority and responsibility for more than one project.
Department Support Organizations	Director of Procurement, Assistance and Program Management (PR-1) is responsible for procurement, cost estimating, and the development of management and business-related policy.
Acquisition Executives	The Associate Director for Program/Project Management and Control (PR-20), through the Office of Program/Project Management has the primary responsibility for Departmentwide overview of project activities for the Acquisition Executive.
Management and Operating (M&O) Contractor	The M&O contractor is assigned/awarded the project for completion.

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EXERCISE 4.2-H Describe the following project organization options and the circumstances under which each may be used:

- Matrix support
- Dedicated

ANSWER 4.2-H Because of the diversity of projects and field organizations, there is not a standard project organization. The project organization can range from a relatively large dedicated project office for large, complex projects to a single project manager (having responsibility and authority for more than one project) receiving matrix support for all activities. The typical project organization consists of a small, dedicated project office (or designated individual) with general matrix support provided by the field organization.

EXERCISE 4.2-I Describe the relationship between the project life cycle and critical decision points.

ANSWER 4.2-I The critical path must be traceable to and lead to achievement of the project objectives. The effectiveness of the designated critical path is directly related to how well the schedule is controlled. "Schedule control is concerned with (a) influencing the factors which create schedule changes to ensure that changes are beneficial, (b) determining that the schedule has changed, and (c) managing the actual changes when and as they occur."

Project life cycle is the life of a project from planning through acquisition, maintenance, operation, and disposition. The project life cycle is essentially a listing of the points or areas that constitute the critical decision points of the critical path.